

# PHENIX WEEKLY PLANNING



Oct. 24, 2013  
Don Lynch

## This Week

- Close out Done WP's
- Continue Assembly of FVTX/VTX West
- Continue assembly and testing of VTX East Strip-pixel ladders
- Continue upgrading VTX/FVTX supply/return lines to stainless
- Continue MPC-Ex installation prep & design/fabrication of assembly fixtures & components
- Finish Installing Window Washer Winch
- Continue sPHENIX support
  - HCal prototype
  - EMCal prototype design continuing
- Future IR evolution modeling

## Next Week

- Continue Assembly of FVTX/VTX East & West
- Continue upgrading VTX/FVTX supply/return lines to stainless
- Continue MPC-Ex installation prep & design/fabrication of assembly fixtures & components
- Continue sPHENIX support
  - HCal prototype assembly
  - EMCal prototype assembly
  - Tilting/rotating SupportStructure assembly & test
- Future IR evolution modeling



10/24/2013

## VTX/FVTX

VTX East subassemblies completed and tested East VTX/FVTX Assembly continues

VTX West strippixel subassemblies complete testing to finish this week then West VTX/FVTX assembly commences





East Strip-pixel Testing:  
5 more ladders to go



VTX West full assembly ready  
for FVTX by tomorrow



PHENIX - SCAFFOLD - NO-3

## VTX & FVTX Remaining Tasks

Receive remaining strippixel stave components	Done
Assemble & test strippixel staves	Done
Receive remaining pixel ladders	Done
Test pixel ladders	Done
Integrate staves & electronics & test	in progress
Assemble East & West VTX & test	in progress
Transport FVTX to Chemistry building.	By 10/30
Integrate FVTX Integrated into East & West VTX.	By 11/1?
Survey VTX/FVTX assembly	By 11/8
Transport VTX&FVTX assembly to PHENIX and install on rails.	11/11
Re-install coolant and N <sub>2</sub> lines, LV, signal and HV cables and fibers	by 11/25
Re-survey full detector in IR	by 11/27
Re-commission VTX & FVTX	by 1/1/14

## DC East & West Repairs Summary of Tasks

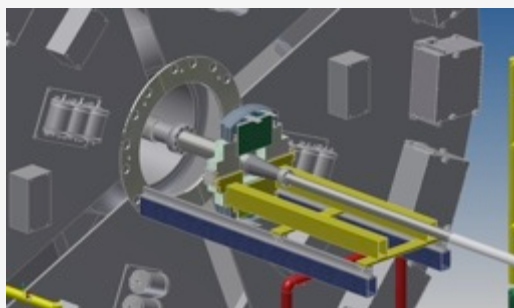
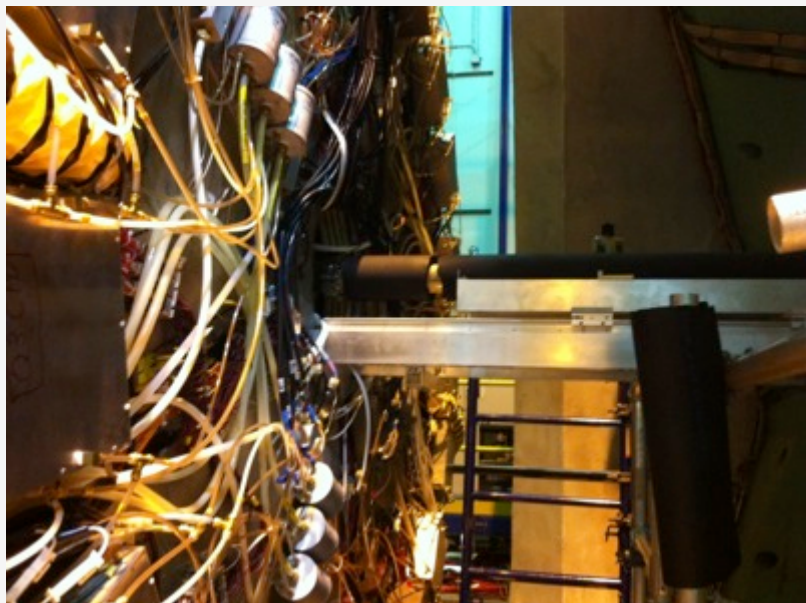
PHOENIX  
STONY BROOK  
NORTH

- East Carriage move to AH - Done
- Work Permit - Done
- Design & Construct tent (similar to tent constructed for DC West last year) to prevent foreign material from entering DC East cavity while window is removed. - Done
- CAD to provide 2 vertical manlifts to allow DC experts to remove and replace window - Done
- Get supplies and materials from Stony Brook for window replacement - Done
- Troubleshooting and repairs on DC West - Done
- Supply Gas, DAQ and Electric to EC East - Done
- Isolate and repair leak on DC East - Done
- Remove and replace window - Done
- Isolate and repair leak under electronics card - Done
- Leak test - Done
- Operational tests - Done
- Remove tent and manlift - Done
- DC West broken wire removal - 12/15 - 12/30

## MPC-Ex Initial (Partial) Installation

Vacuum bellows anti-squirm in MPC S Cavity installed.

Installation tool assembled; Tool placement for installation is in progress

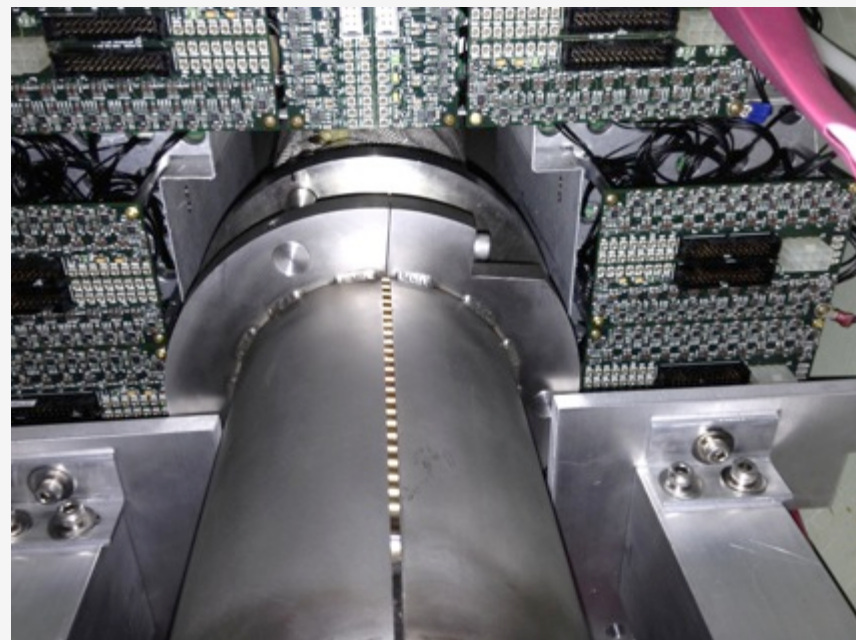
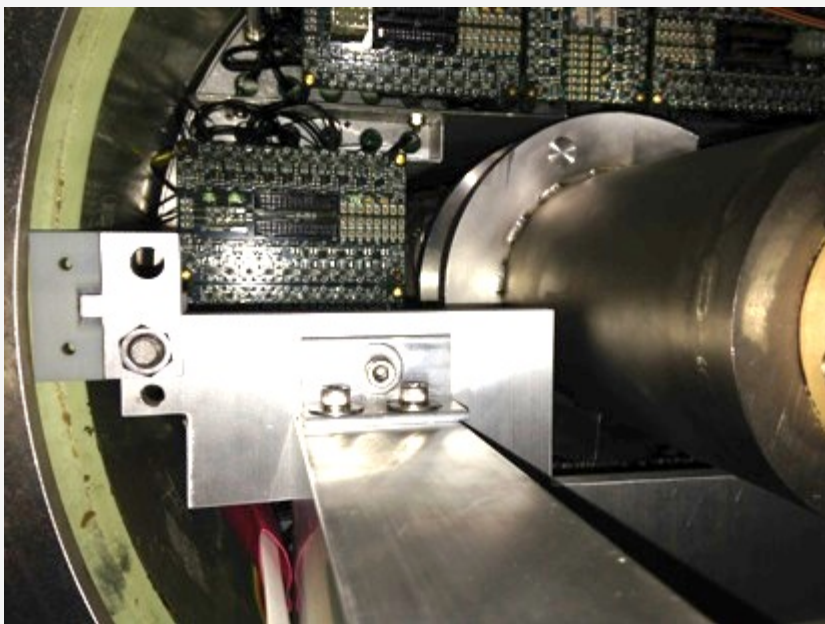
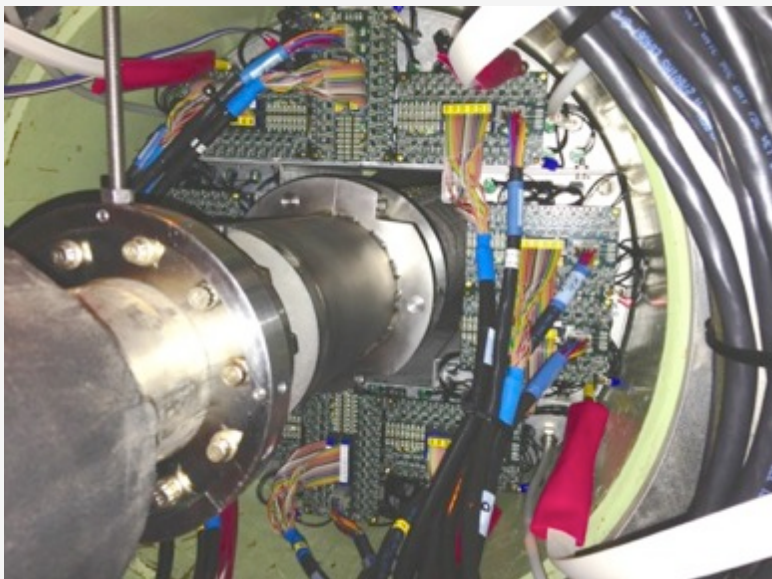


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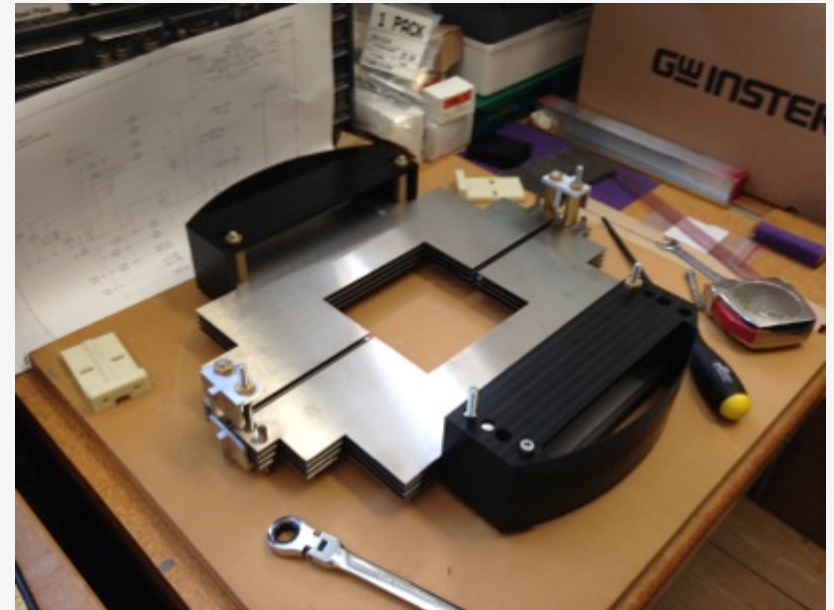
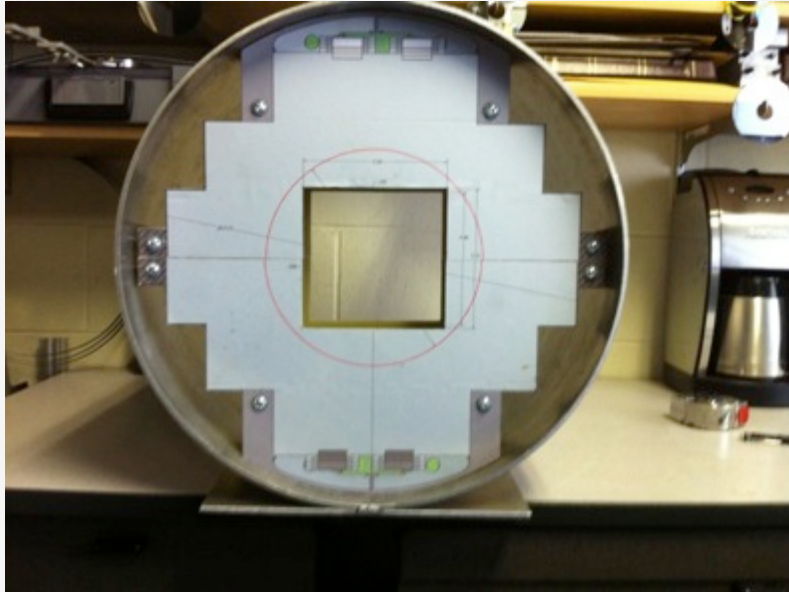
10/24/2013



# PHENIX - 10/24/2013



10/24/2013



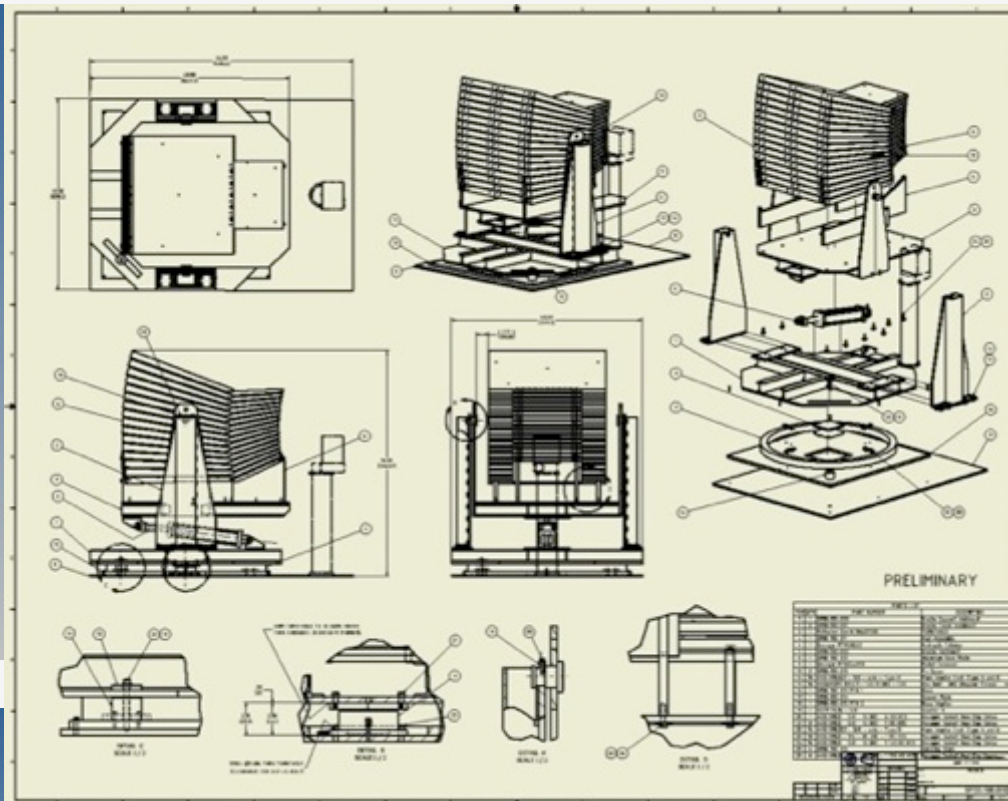
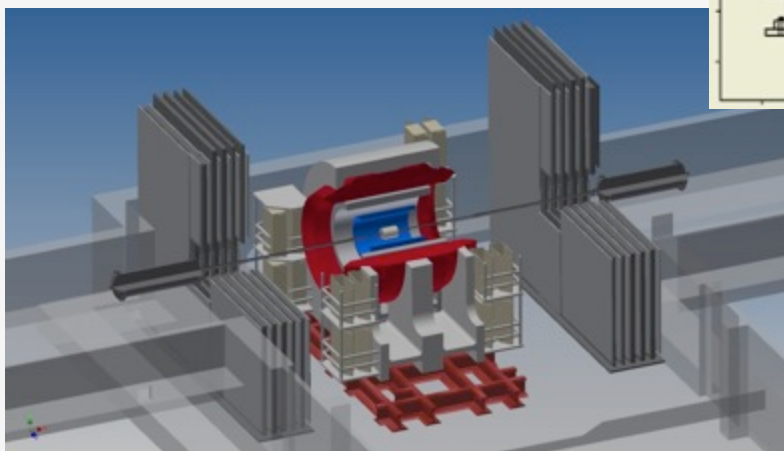
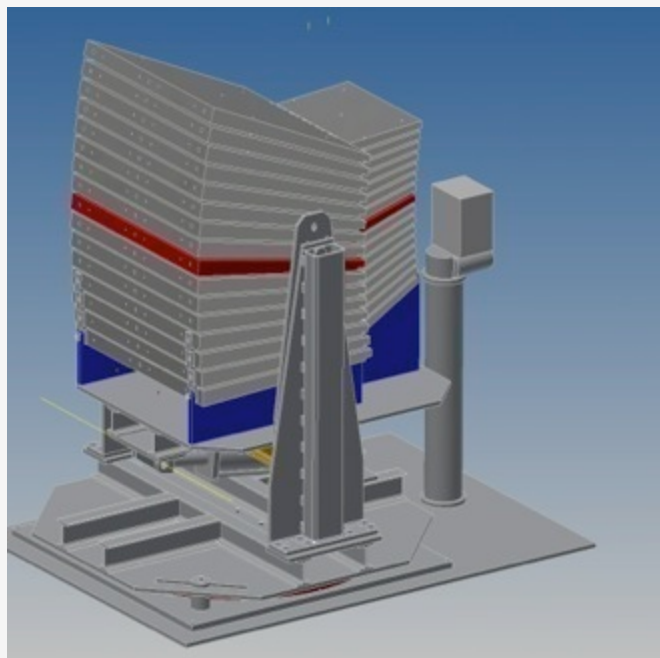
Partial installation modified to include all (16) tungsten plates. Additional spacers to accommodate have been ordered.

Assembly to commence next week

10/24/2013

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Remaining Hcal Prototype support components expected this week



Hi-Bay  
Prototype  
Assembly Area

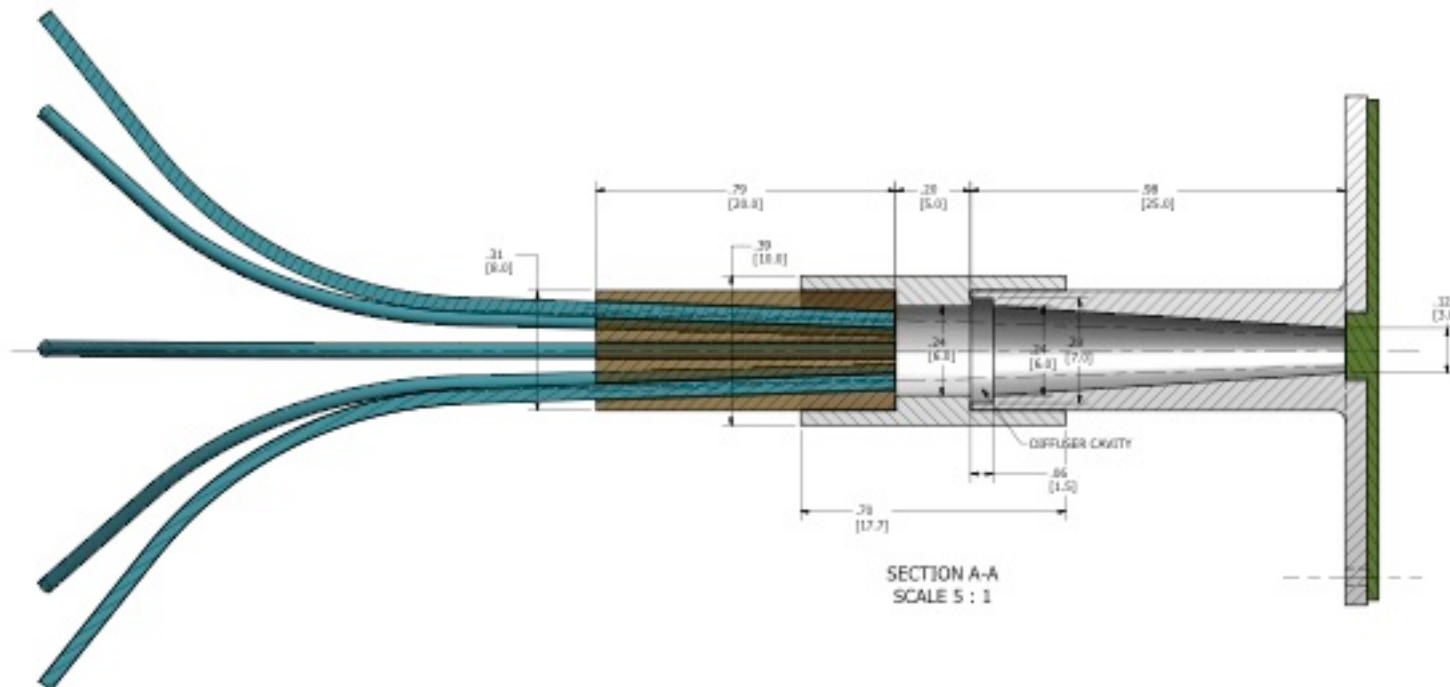


sPHENIX prototype  
electronics rack



10/24/2013

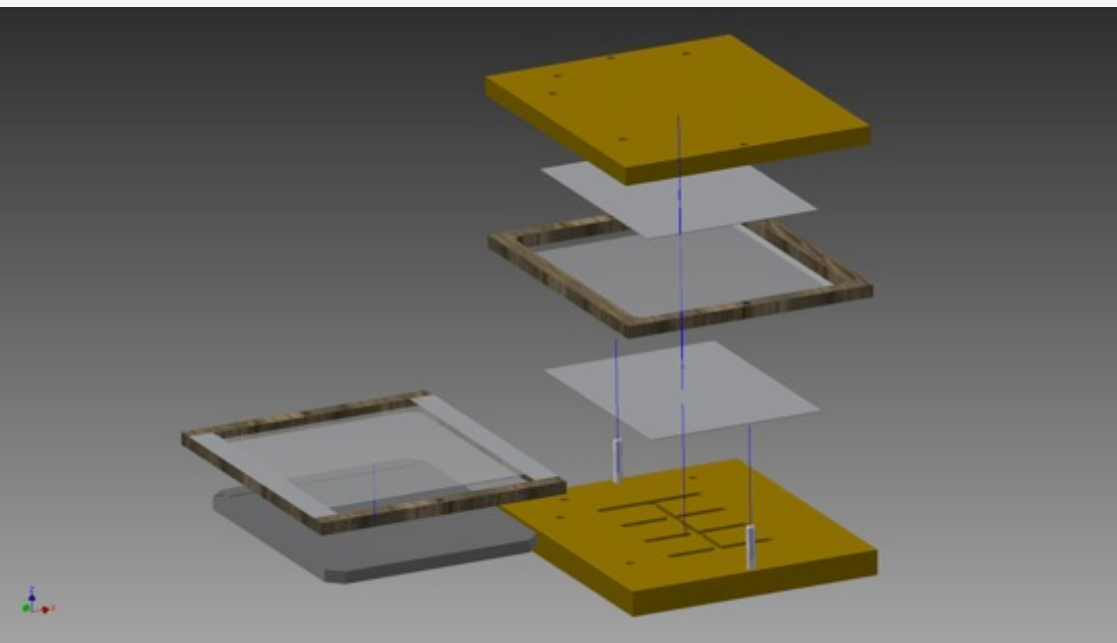




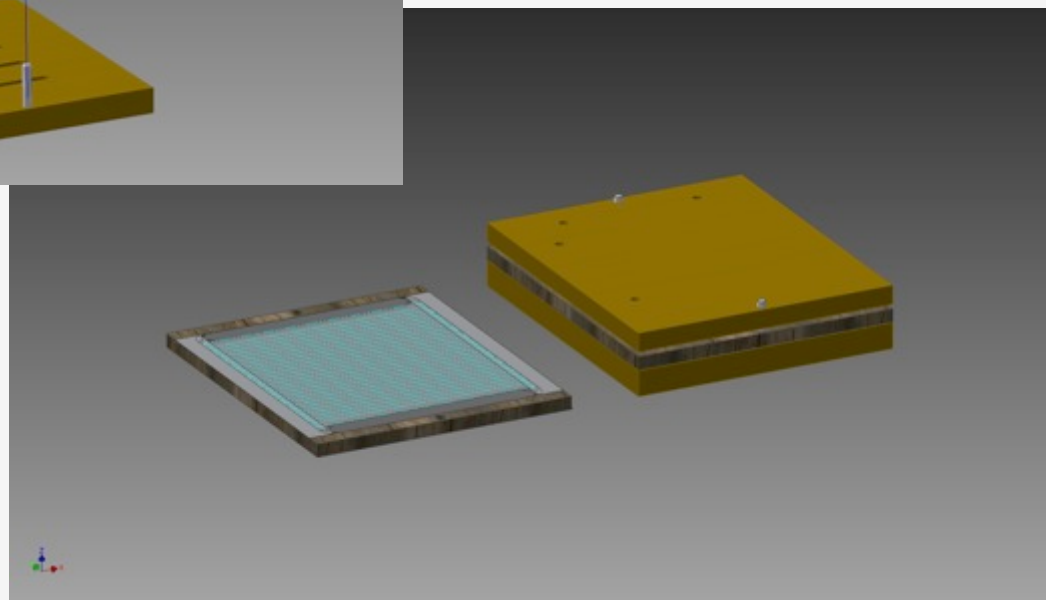
Light Collection for HCal

# EMCal Prototype

Gluing Fixture for sandwiches,  
Tower Stacking/holding fixture  
fabricated and received.  
Assembly starting this week

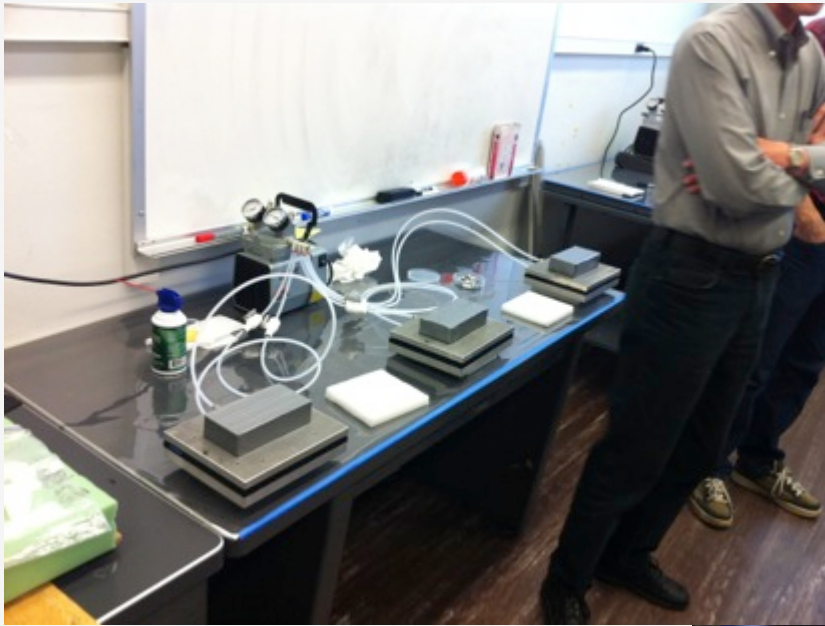


Prototype "Egg Carton"  
light collection



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PHENIX - SDAO - NO-3



10/24/2013

## sPHENIX Prototype Assembly and Test Tasks

TECHNICAL SUPPORT NOTES

Design Hcal and EMCal Prototypes and support components and shipping crates - in progress

Procure materials and detail parts - in progress

Receive and inspect parts

Assemble prototypes

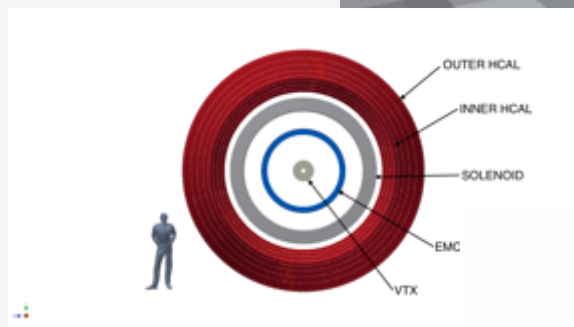
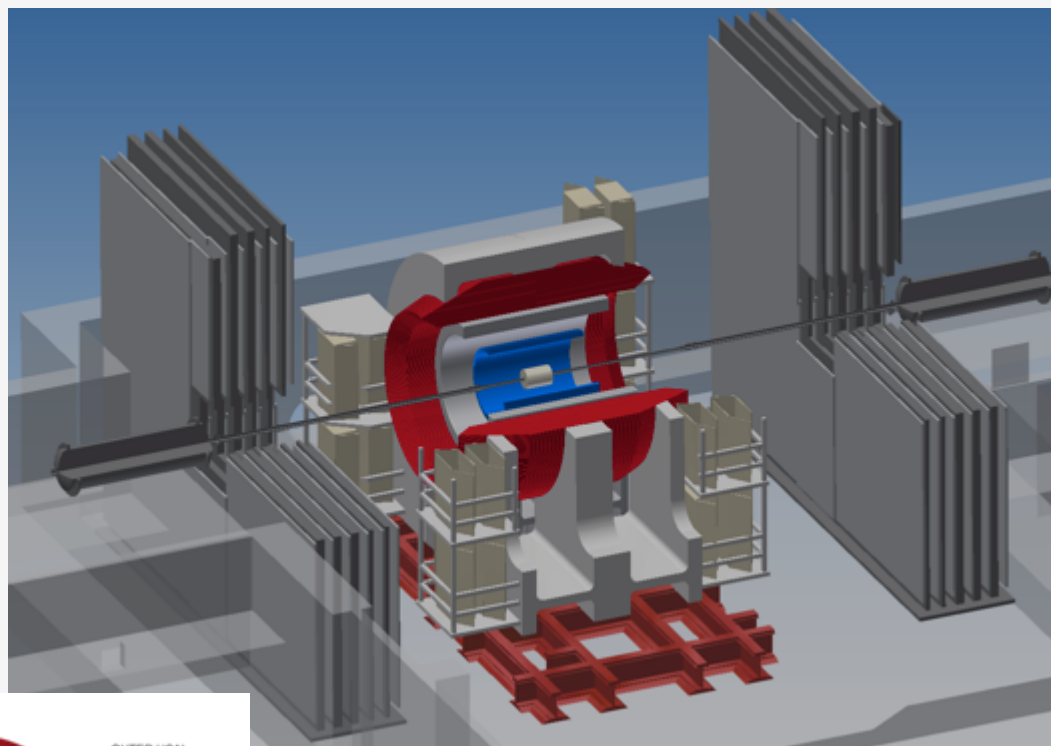
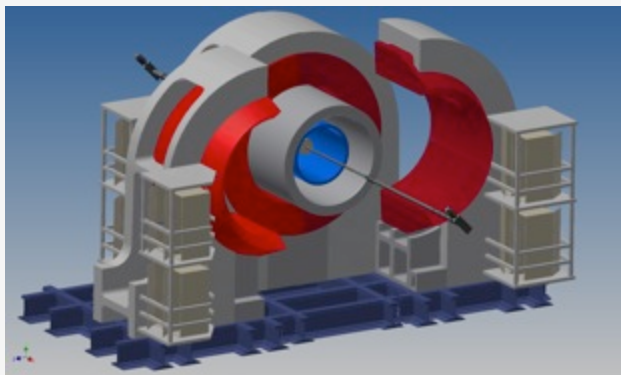
Test assemblies for mechanical fit and function

Package and ship prototypes to FERMI Lab for performance tests

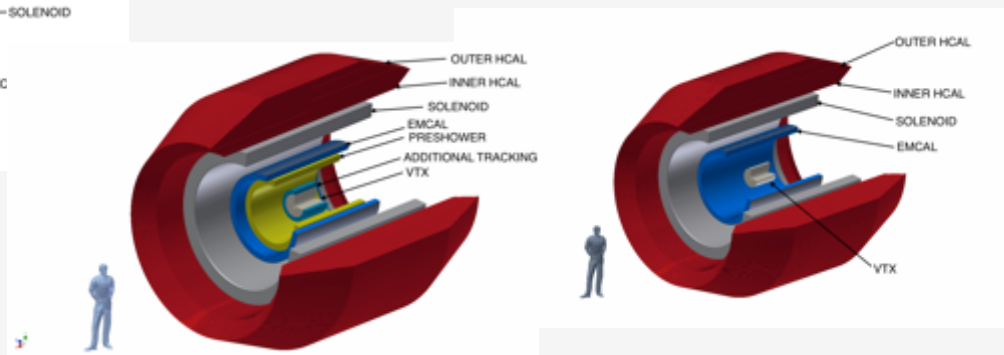
Test and Evaluate at Fermi Lab



TECHNICAL SUPPORT

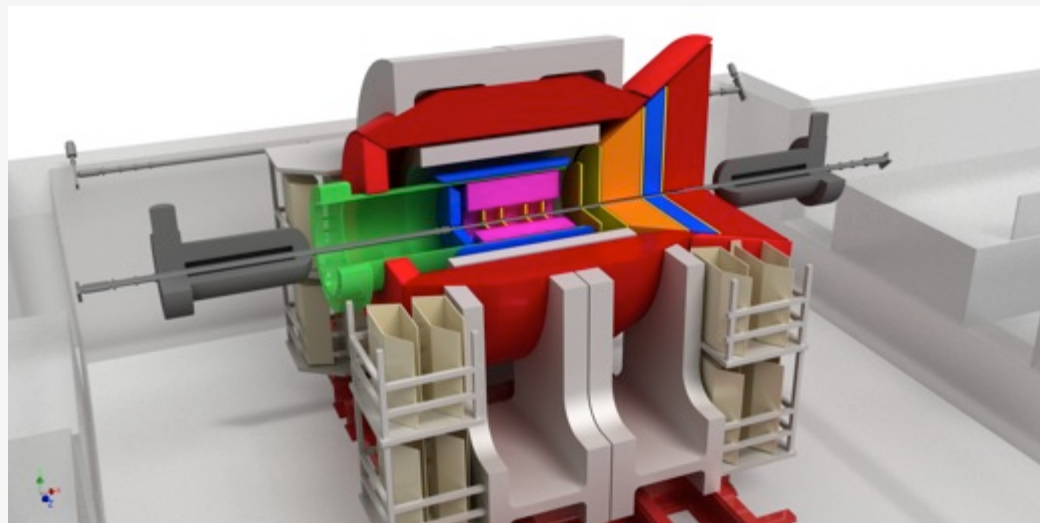


sPHENIX Modeling  
support for  
updated MIE

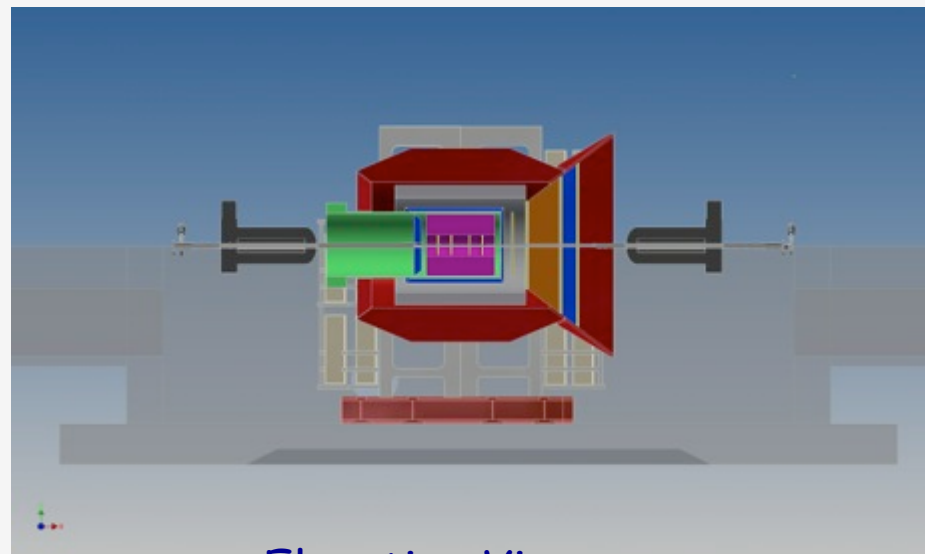
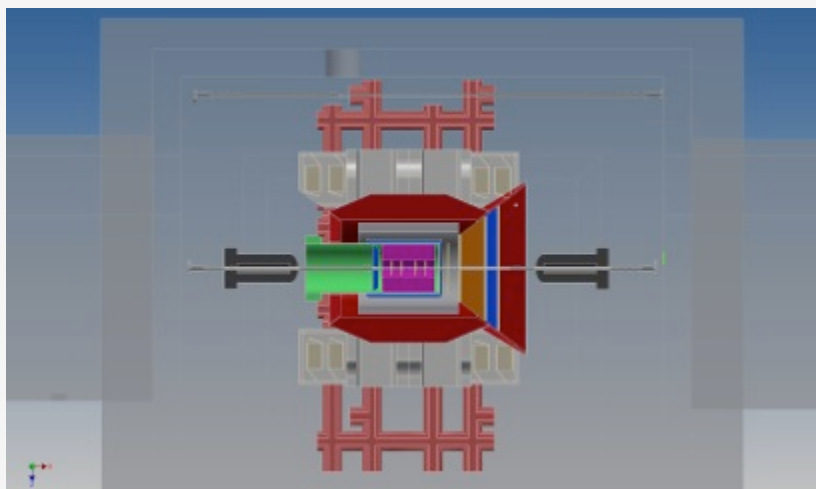


10/17/2013

# ePHENIX



Plan View



Elevation View

10/24/2013



## Window Washer Winch Upgrade



10/24/2013

## Window Washer Winch Upgrade Summary of Tasks

Receive and Inspect winch and components - Done

Design and Fabricate Winch & Sheave Base - Done

Install and test Winch, integrate with window washer  
hardware, controls and power - **In progress**

Final Inspection and approval of window washer upgrade

(Note: remote safety pin insertion and retraction was installed and has been in  
operation since the start of run 13.)



### Alcohol Chiller Work For Shutdown 2013



Merlin Chiller

➤ Chiller supplied about ½ the flow as in the past.

- Pressure on chiller says ~70-80psi
- Install gauge on supply line and measure actual output pressure.
- Replace chiller with spare if needed.
- Send old chiller out for maintenance or replace.

New Chiller failed to be returned for warranty replacement.

### Re-Insulate Glycol lines



❖ Remove old polyethylene insulation and wrap and replace with foam rubber insulation.

- Temp of fluid is affected too much by temp change in the gas house.
- Lines are condensing and dripping because of gaps in insulation.

## Assembly Hall Cable Tray Covers



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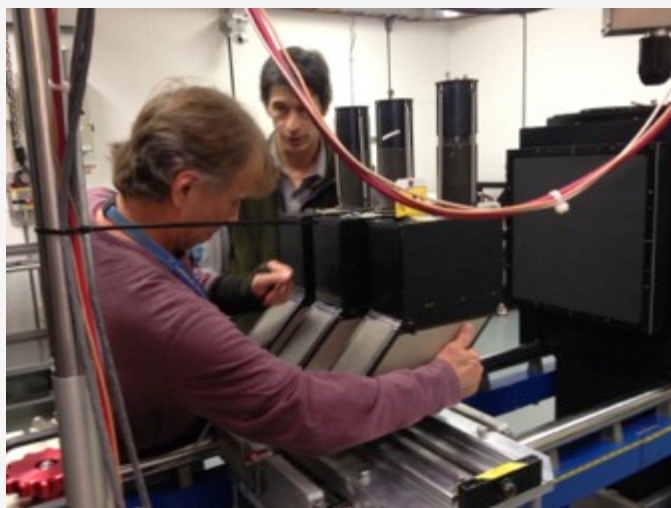


Replace VTX supply tubing with stainless steel  
as much as possible - **in progress**

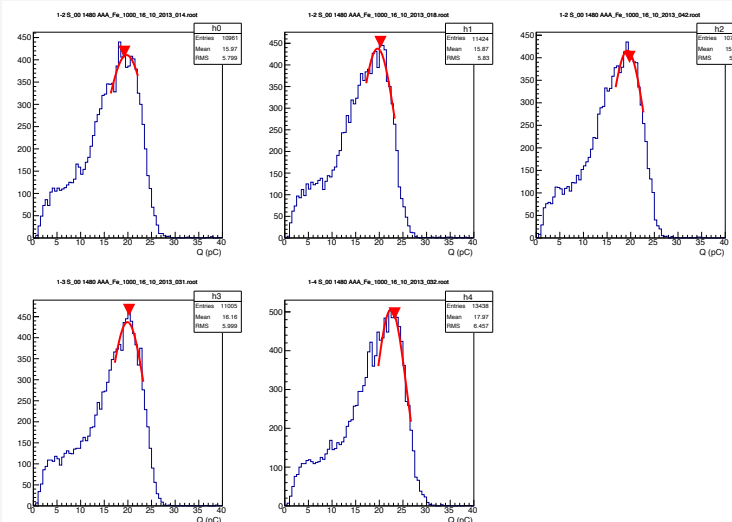


## Additional Shutdown Work

- ZDC Remove, Test, Recalibrate



Test is done ZDC's returned to south tunnel (and re-installed?)





## 2013 Shutdown Schedule

TESTING - SHUTDOWN

Prep for 2013 shutdown	Done
Design, Fabricate MPC-Ex	
Define tasks and goals	
Analysis and design of fixtures, tools and procedures	
Fabricate/procure tools and fixtures	
Tests, mockups, prototypes	
Receive, fabricate, modify, finish installables	
Review and approval of parts, tools, fixtures and procedures	
Assembly and QA tests	
VTX Strippixel redesign	Done
VTX Strippixel 1 <sup>st</sup> article stave assembly	Done
VTX Strippixel 1 <sup>st</sup> article qualification/performance tests	Done
VTX Strippixel sensor reclamation	Done
Run 12 Ends	Done
Shutdown Standard Tasks	Done
• <del>Open wall, disassemble wall, Remove MuID Collars</del>	
• Move EC to AH, etc.	
VTX/FVTX Post run tests	Done
Disassemble VTX/FVTX services	Done
July 4 <sup>th</sup> Holiday	Done
Remove VTX/FVTX and transport to Chemistry Lab	Done
Remove Lampshade MMS, East Vertical	Done
VTX strippixel stave production	Done
Pixel Ladder repairs	Done
VTX Strippixel ladder assembly & Test	7/15-10/30/2013
Assemble, Test and Install MPC-Ex (Partial, location TBD)	7/22-11/15/2013

MuTR Troubleshooting, maintenance and repairs	Done
Summer Sunday (8/4) Prep and teardown	Done
Summer Sunday (RHIC)	Done
DC West troubleshooting & Repairs	Done
DC East Window Upgrade and Related Repairs	Done
sPHENIX HCal Prototype Assembly/test	8/19-12/31/2013
Re-assemble VTX/FVTX halves	by 11/1/2013
Test, survey (at Chemistry and IR) and re-install VTX/FVTX	11/1-11/11/2013
Install & Survey VTX/FVTX in 1008 IR	11/11-11/25/2013
VTX Commissioning	<b>11/25/2013-1/31/2014</b>
Other detector maintenance as required	As required
Infrastructure maintenance as required	As required
Pre-run commissioning and prep for run 14	<b>11/25/2013-1/31/2014</b>
Veterans Day, Lab Holiday	11/11/2013
Prep for EC roll in	11/1-11/22/2013
Roll in EC	11/25-11/27/2013
Prep IR for run	11/1-11/30/2013
Thanksgiving Holidays	11/28-29/2013
Pink/Blue/White sheets	<b>12/14-1/31/2014</b>
DC West wire repairs	12/15-12/30/2013
Christmas Holiday	12/24-25/2013
New Year's Day Holiday	1/1/2014
Start run 14	<b>2/3/2014</b>

## Safety and Security



From Ray Karol:

1. Fixed Ladders - review the BNL video on safe fixed ladder used:

<http://www.youtube.com/watch?v=HSWb7SzDaS4>

2. In FY13, many of BNL injuries were due to slips, trips, or falls. Most of these were related to icy and slippery conditions. Use common sense approaches to prevent these injuries. Choices like proper footwear, choosing a safe route to walk, holding onto the car door when exiting the vehicle, and walking with your hands free can make a big difference in the number of folks injured by falls.

You can reduce winter and other slipping hazards by buying shoe covers at the following websites. Make sure that you only use the covers in the areas that they are intended for as described at the website. Use your group account to order:

<http://www.jordandavid.com/>

Or

<http://yaktrax.com/>

From John Maraviglia:

1. ODH-1 Training Practical Wed. 11/13, Wed. 12/4, Fri 12/6

Attend one of these from 11:15-Noon if you need to access tunnel during run 14

From John Maraviglia (cont'd):

## Safety and Security

### 2. From John Maraviglia:

If you currently have unescorted access to the RHIC tunnel (all with TLD badges) then you need to attend a short training session on the newly installed Vacuum Oxygen Deficiency Hazard (VODH) safety system. This short training session is important to your safety and to those you may escort into the area. The new detection method and helium isolation system will be discussed, which is enabling us to return the hazard classification to ODH Class 0.

Please attend any session:

All sessions are 11:15 AM - 12 noon, Bldg 911 Snyder Seminar Room

November 12

November 19

November 21

December 5

(A reminder will be sent as the first date approaches.)

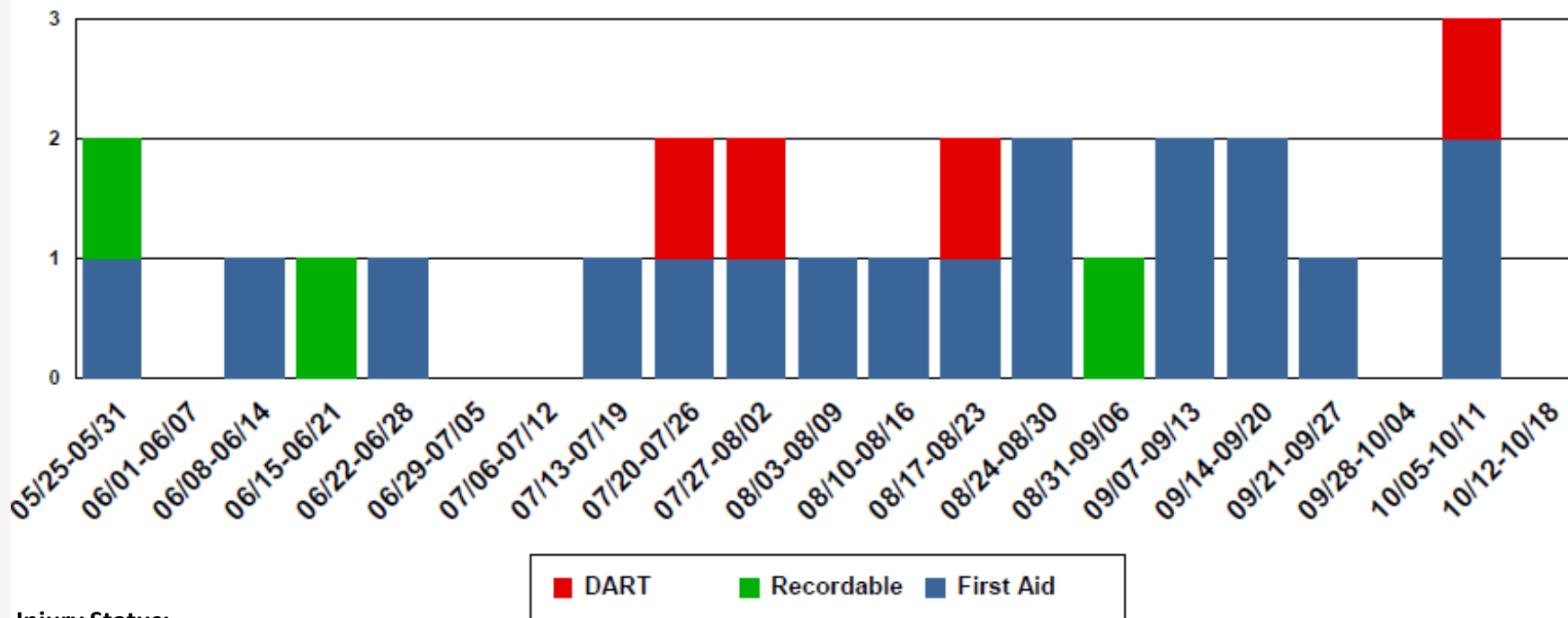
### Other Safety Info:

- Vertical Ladder Protocol
- Procedures



WISCONSIN SCIENCE CENTER

### Injuries Per Week As of 10/18/2013



#### Injury Status:

FY14 YTD: DART – 1, TRC – 1, First Aid – 2

FY13: DART – 14, TRC – 37, First Aid – 53

FY12: DART – 19, TRC – 38, First Aid – 69

FY13 Injury Listing: <https://intranet.bnl.gov/esh/shsd/seg/OccInj/BNLInjuries.aspx>

#### Recent Injuries

None

Recent Events		
10/17/13	SC-BNL	A lawn mower caught fire in front of Building 703 while in use. BNL police and fire fighters responded to the scene and extinguished the fire in less than 10 minutes. No injuries were sustained. The mower is damaged and the damage is estimated to be in excess of \$10k. Approximately 3 gallons of fuel oil was spilled onto asphalt and soil at the site. The spill was contained. BNL grounds personnel have responded to remediate the spill. ( <a href="#">Event Link</a> )
10/16/13	SC-BNL	While using a Troxler gauge to perform soil density tests near the recharge basin of the new sewage treatment plant, a sub-contractor violated several requirements of the work control document. The following requirements were violated: <ul style="list-style-type: none"> <li>• Dosimetry was not issued</li> <li>• Radiation Work Permit was not obtained</li> <li>• The individual performing the work did not sign the work control document</li> <li>• Rad Worker 1 training was not completed</li> <li>• There was no notification of rad material (part of the Troxler gauge) entering or leaving the site and therefore, no rad survey of the instrument was performed</li> <li>• A copy of the license for the Troxler gauge was not supplied. (<a href="#">Event Link</a>)</li> </ul>
10/14/13	Non-Reportable	Legacy fuel oil contamination to soil in a lined, bermed area near Building 610 was uncovered by a contractor performing work in the area. It is believed to be remains from a spill that occurred in the 1980's. ( <a href="#">Event Link</a> )

## Where To Find PHENIX Engineering Info

*Start of Run 14 Changed to Feb. 3, 2014*

*to accommodate C-AD 56 Hz cavity installation*

*PHENIX work schedule remains unchanged.*

*additional time to be used to commission*

*MPC-Ex, FVTX/VTX and all other subsystems.*



[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)

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